I.C.C. Docket No. 02-0864
Staff Ex. 24.0
Public

REBUTTAL TESTIMONY TO SBC ILLINOIS

OF

ROBERT F. KOCH

RATES DEPARTMENT

TELECOMMUNICATIONS DIVISION

ILLINOIS COMMERCE COMMISSION

ILLINOIS BELL TELEPHONE COMPANY

FILING TO INCREASE UNBUNDLED LOOP AND NONRECURRING RATES

DOCKET NO. 02-0864

** ** - Denotes Proprietary Information

February 20, 2004

I. Introduction

Q. Please state your name and business address.

A. My name is Robert F. Koch and my business address is 527 East Capitol Avenue, Springfield, Illinois 62701.

Q. Are you the same Robert Koch that filed Direct Testimony and Rebuttal Testimony to Intervenors in this proceeding?

A. Yes.

Q. What is the purpose of this rebuttal testimony?

A. I will respond to certain cost issues put forth by SBCI, as they relate to my Direct Testimony and my Rebuttal Testimony to Intervenors. Specifically, I will address the rebuttal testimony of James R. Smallwood, SBCI Exhibit 4.1, regarding network design and cost modeling issues. I will also be addressing imputation issues discussed in the rebuttal testimony of Eric Panfil, SBCI Exhibit 1.1. Finally, I update several schedules that were previously filed in my direct testimony to reflect changes proposed by Staff in this rebuttal round, as well as changes made by SBCI to its LoopCAT model, Annual Charge Factor ("ACF") spreadsheet, and Support Asset Factor ("SAF") spreadsheet.

Q. Please summarize your findings in this proceeding.

A. After review of pertinent SBC and CLEC rebuttal testimony, I continue to recommend modifications to LoopCAT. I continue to recommend that an 18kft

crossover point be implemented in the network design assumptions for UNE loops, replacing the 12kft crossover point that is hard-coded into the cost model. I also continue to recommend that DLC investment be reduced by 25% in order to more appropriately allocate common investment to UNE loops. The only departures from my direct testimony, in fact, are to the annual charge factors ("ACFs") that I calculate for use in LoopCAT and the Shared and Common Cost Model. These modified calculations reflect changes to the ACF cost development tool submitted by SBCI with its January 20, 2004, filing of rebuttal testimony, and in no way reflects changes to inputs proposed by Staff.

Due to changes to SBCI's and Staff's proposed UNE loop rates, I also modify my imputation analysis. Although the raw values utilized in the imputation tests change, my conclusions remain largely unchanged. That is, it remains clear that SBCI's proposed UNE rates cause its retail competitive business access line, ISDN, COPTS, and STF services to fail imputation in most cases, while Staff's proposed UNE rates pass the imputation test for each of these services.

II. Cost Issues

Q. Please describe SBCI witness Smallwood's concerns regarding the proposals in your direct testimony?

A. Mr. Smallwood addresses three concerns that I raised in my direct testimony. First, Mr. Smallwood takes issue with my position that LoopCAT does not model all of the different sizes of DLCs available in the marketplace.[1] Second, Mr. Smallwood takes issue with my position regarding the proper fiber-copper break point.[2] Third, Mr. Smallwood takes issue with my recommendation to remove 25% of DLC investment from LoopCAT.[3]

A. Types of RT Cabinets

Q. How does Mr. Smallwood address your concerns regarding the availability of various DLC sizes in LoopCAT?

A. I indicate in my direct testimony, Staff Exhibit 4.0, that Staff is aware of at least ten sizes of RT cabinets that are available from SBCI's vendor, Lucent Technologies, while LoopCAT only utilizes two sizes of RT cabinets.[4] As a result of this restriction in LoopCAT, I am of the opinion that LoopCAT's results are potentially inefficient and do not reflect the least cost technology choices available to SBCI. Mr. Smallwood counters this argument in three ways. First,

[1] SBCI Exhibit 4.1 at 75-78.
[2] Id. at 20-22.
[3] Id. at 83-84.

he argues that it would be inefficient for SBCI to maintain ten different sizes of RT cabinets in its inventory.[5] Second, he argues that smaller RT cabinets are actually more expensive on a per-unit of capacity basis, and therefore less efficient than the RT cabinet choices available in LoopCAT.[6] Finally, Mr. Smallwood argues that the number of systems that would be efficient to deploy on a per line basis would likely be so small that the overall impact would not be significant.[7] Regardless, Mr. Smallwood also indicates that SBCI has incorporated a smaller RT cabinet and the use of controlled environmental vaults ("CEVs") to address my concerns as part of its revisions to LoopCAT filed with the company's rebuttal testimony.[8]

Q. What is your opinion of Mr. Smallwood's argument concerning the per-unit cost of capacity?

A. Mr. Smallwood is concerned that the per-unit cost of capacity for smaller RT cabinets is higher than for the RT cabinets SBCI has chosen to model in LoopCAT is misplaced. The per-unit of capacity cost does not have a direct corresponding effect on the per loop cost. Rather, it is the <u>total investment per unit of demand</u> that affects the cost per loop. As long as the smaller RT is less expensive than the larger RT in total (and both RTs are capable of serving the relevant customer demand), the effect of using a smaller RT is that less cost is

[4] See Staff Exhibit 4.0 at 14.
[5] See SBCI Exhibit 4.1 at 76.
[6] Id.
[7] Id.
[8] Id at 75, 76.

distributed over the same customer base and therefore the cost per customer decreases.

For example, consider the choice that a family of four has in buying a new vehicle. Assume that the family narrowed its choices down to a mid-sized sedan that can seat five people and costing $20,000 versus a school bus that has a capacity of 60 and costing $120,000. The cost per unit of capacity for the sedan is $4,000 ($20,000 / 5) while the cost per unit of capacity for the school bus is $2,000 ($120,000 / 60). Using Mr. Smallwood's logic, it would be more economical to spend the additional $100,000 for the school bus because its cost per unit of capacity is half that of the sedan. Obviously Mr. Smallwood's methodology yields the incorrect result. If the analysis were performed on the investment per unit of demand, however, a more appropriate result is obtained. The cost per unit of demand for the sedan is $5,000 ($20,000 / 4) while the cost per unit of demand for the bus is $30,000 ($120,000 / 4). Naturally, the family would recognize this fact and save $25,000 in transportation costs per family member by selecting the sedan.

Q. What is your opinion regarding Mr. Smallwood's arguments that it would be inefficient to maintain ten different sets of RT cabinets and that it would result in an increase in costs?

A. Mr. Smallwood's assertions are baseless. First, I am not convinced that it would be inefficient to maintain ten different sets of RT cabinets, particularly in the

context of building an efficient hypothetical network from the ground up. Mr. Smallwood cites additional sets of engineering specifications as a concern in this regard. Although Mr. Smallwood's representations sound somewhat plausible on their face, he presents no evidence that the additional requirements placed on engineers would result in any significant increase in overall costs. Second, Mr. Smallwood does not provide any evidence to support his claim that the effect of implementing my recommendation would be to slightly increase the cost per loop. To prove such a claim, Mr. Smallwood would have to produce at least one version of LoopCAT with all ten varieties of RT cabinet included. Mr. Smallwood does not indicate that he has done so, and therefore this claim is baseless as well.

Mr. Smallwood's assertions are not only baseless but they are contrary to the evidence in this proceeding. As was indicated previously, SBCI has placed additional RT equipment in to network design of LoopCAT in its rebuttal filing. Specifically, the company added a 448-line DLC unit and a CEV into the LoopCAT design. If Mr. Smallwood's assertions regarding efficiency were correct, one would expect the cost per loop to *increase* as the RT equipment choices available in LoopCAT have doubled. The table below compares the LoopCAT results submitted by SBCI in its initial filing in December of 2002 and the subsequent revision submitted by SBCI in January of 2004, for 2-wire analog loops. The table shows that there is a *reduction* in cost as a result of the addition

of RT equipment. Any reductions to efficiency that may have occurred were certainly overcome by the decrease in cost per unit of demand.

TELRIC Cost for Remote Terminal Equipment for 2 Wire Analog Loops

	2002 Filing	2004 Filing*	Reduction	% Reduction
Access Area A	$**X.X**	$**X.X**	$**X.X**	15.27%
Access Area B	$**X.X**	$**X.X**	$**X.X**	30.13%
Access Area C	$**X.X**	$**X.X**	$**X.X**	31.63%

* TELRIC Cost for 2004 Includes Cost of RT Equipment and CEV

Q. What is your opinion regarding SBCI's implementation of two new RT cabinet sizes in its network design?

A. SBCI has taken a step in the right direction by integrating a new DLC cabinet size and the CEV into LoopCAT. The impact of adding the two additional types of RT equipment in LoopCAT, as shown in the table above, is a reduction in RT cabinet investment per loop that subsequently leads to a reduction in overall TELRIC cost per loop. Therefore, it is my opinion that these additions are appropriate, as they result in a more efficient network configuration.

Q. Has your recommendation changed regarding the inclusion of different sized RT cabinets from direct testimony?

A. Yes. At the time I filed direct testimony, I indicated that Staff was not aware of any way to adjust LoopCAT to reflect the inclusion of additional RT cabinets. By virtue of Mr. Smallwood's rebuttal testimony and the new version of LoopCAT

presented by the company, it is clear that it is possible to modify LoopCAT to include additional varieties of RT. However, as I lack sufficient resources and knowledge necessary to make such an alteration to LoopCAT, I recommend that SBCI produce a run of LoopCAT on all of its various types of loops and in all of its access areas to determine the impact on cost per loop. Although I cannot state for certain that these modifications would cause the cost per loop to decrease, the evidence in this proceeding clearly illustrates that the cost per loop decreased as a result of SBCI's addition of two additional types of RT cabinets in LoopCAT. It is therefore reasonable to expect that loop costs would decrease even further with the inclusion of additional RT types. In fact, it would be prudent to perform sensitivity analysis on each type of RT cabinet to determine whether its inclusion is efficient. I propose that SBCI be required to use the least cost mix of RT cabinets in its final loop cost development whether that mix is what is currently in LoopCAT, or if additional cabinets are added to the mix. Regardless, it is up to SBCI to prove that my reasonable expectations are not correct. The only acceptable form of proof is a showing, via a comparison of LoopCAT results, that the addition of other RT cabinet sizes does not result in a lower terminating equipment cost per loop.

B. Copper-Fiber Crossover Point

Q. Please describe Mr. Smallwood's arguments regarding the copper-fiber crossover point.

A. Mr. Smallwood makes three arguments in an attempt to refute my proposal to increase the copper-fiber crossover point to 18kft. First, Mr. Smallwood disagrees with my contention in direct testimony that SBCI's proposed 12kft crossover point inappropriately inflates the number of remote terminals in the cost study.[9] Second, Mr. Smallwood takes exception to my assertion that the FCC rejected the use of a 12kft crossover point.[10] Finally, Mr. Smallwood argues that the cost impact of my proposal would be small.[11] On the basis of these arguments, he recommends that the Commission support his 12kft design.

Q. What is your opinion with regard to Mr. Smallwood's argument that a 12kft crossover point does not inflate the number of RTs?

A. Mr. Smallwood is content to stand behind SBCI's engineers' determination that the most appropriate forward-looking design standard is to place the crossover point at 12kft as the basis for his recommendation. In my Direct Testimony, I argued that SBCI's design is not the most efficient possible because it places an unrealistic number of RT's in the modeled network, and is therefore not TELRIC compliant. Mr. Smallwood does not disagree with my assertion that the 12kft crossover point contains more RT equipment and produces higher cost than my proposal. Nor does Mr. Smallwood contend that the network design that I propose in any way will not produce a network that is capable of meeting the demands of the services that SBCI plans to offer in the foreseeable future.

[9] Id at 20, 21.
[10] Id at 21, 22.
[11] Id at 22.

Rather, the thrust of Mr. Smallwood's argument is that the 18kft option, although capable of supporting xDSL service throughout the network, is not capable of supporting all advanced services.[12] This point, while technically correct, is deceptive, as there is no evidence in the record, or in any other forum that I am aware, to suggest that SBCI plans to offer advanced services to the extent that they are modeled in LoopCAT. In fact, SBCI has specifically stated that it will refrain from doing so. Until such time as SBCI commits to upgrading its network to offer such services throughout Illinois, I must conclude that the network design proposed by SBCI is over-built and not TELRIC compliant.

Q. What is your response to Mr. Smallwood's arguments against your citation to an FCC Universal Service Order that rejected the use of the 12kft crossover point?

A. I agree with Mr. Smallwood that the FCC finding that I cited was for the purpose of universal service and not for the purpose of UNE development. My attempt in direct testimony was to share with the Commission that the FCC had found that the 12kft crossover point was inappropriate in a proceeding. However, I note that the very orders advanced by Mr. Smallwood support my point. While he is correct to assert that the various federal Universal Service Orders generally discourage the use of USF inputs for purposes of developing TELRIC costs,[13] one of the

[12] Id. at 19-21.

[13] *See, e.g., Tenth Report and Order*, ¶30, In the Matter of Federal-State Joint Board on Universal Service / Forward-Looking Mechanism for High Cost Support for Non-Rural LECs, FCC No. 99-304, CC

reasons for this is the fact that the USF methodology designs a very advanced network that does not impede advanced services. As the FCC noted in its USF Inputs Order:

> Finally, the use of a forward-looking cost model allows the Commission **to ensure that universal service support amounts are based on a network that will provide the supported services and not impede the provision of advanced services**. In contrast, a support system based on the existing network, which is in some cases of lower quality, would not provide sufficient support for necessary upgrades. Basing support on the forward-looking cost of a network that is capable of providing the supported services will ensure that universal service support is based on a network with the capacity to ensure service quality and access to advanced services in rural areas.[14]

In other words, the FCC cautioned state Commissions against doing precisely what SBCI is trying to do here: base costs upon a network that is essentially gold-plated. The FCC made this even clearer in its recent TELRIC NPRM[15] when, while again cautioning state Commissions against using USF inputs for TELRIC purposes,[16] it stated that:

> A forward-looking costing methodology considers what it would cost today to build and operate an efficient network (or to expand an existing network) **that can provide the same services as the incumbent's existing network**. The benefit of a forward-looking approach is that it gives potential competitors efficient price signals in deciding whether to invest in their own facilities or to lease the incumbent's facilities. [17]

Accordingly, Mr. Smallwood's arguments in this regard should be discounted.

Docket Nos. 96-45, 97-160 (October 21, 1999: Adopted; November 2, 1999: Released)(hereafter "USF Inputs Order")("The federal cost model was developed for the purpose of determining federal universal service support and it may not be appropriate to use nationwide values for other purposes, such as determining prices for unbundled network elements.)

[14] USF Inputs Order, ¶9.

[15] *Notice of Proposed Rulemaking*, In the Matter of Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers, FCC No. 03-224, WC Docket No. 03-173 (Adopted: September 10, 2003; Released: September 15, 2003) (hereafter "TELRIC NPRM")

Q. What is your opinion regarding Mr. Smallwood's citation to an FCC arbitration proceeding to justify the use of a 12kft crossover point?

A. Mr. Smallwood cites the FCC's Virginia Memorandum Opinion and Order[18], which is an arbitration proceeding that finds that a 12kft copper-fiber crossover point is more appropriate than an18kft break point for UNE purposes.[19] I have serious concerns with the applicability of the citation to this proceeding. The Virginia Memorandum Opinion and Order explicitly states its authority in the proceeding as follows:

> In this proceeding, the Bureau, acting through authority expressly delegated by the Commission, stands in the stead of the Virginia State Corporation Commission (Virginia Commission) for the limited purpose of this arbitration.[20]

This was a finding by the FCC Wireline Competition Bureau, and not the Commission itself, for the sole purpose of settling a dispute in the State of Virginia. As such, this order is not binding on all of the states. Further, the order only speaks to evidence presented concerning Verizon Virginia's network design, whose characteristics are undoubtedly not identical to those of SBCI. I urge the

---

[16] TELRIC NPRM, ¶46
[17] TELRIC NPRM, ¶30 (emphasis added)
[18] *Memorandum Opinion and Order*, In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration, CC Docket No. 00-218; and In the Matter of Petition of AT&T Communications of Virginia Inc., Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., CC Docket No. 00-251, DA 03-2738, (Adopted: August 28, 2003; Released: August 29, 2003) (hereafter "Virginia Memorandum Opinion and Order")
[19] See SBCI Exhibit 4.1 at 21, 22; Virginia Memorandum and Opinion Order at ¶¶ 241, 242.
[20] Virginia Memorandum Opinion and Order at ¶ 2.

Commission to take this fact into consideration as it weighs the applicability of any findings in the Virginia Memorandum and Opinion Order to this proceeding.

Q. What network characteristics might lead the Commission to conclude that a different fiber-copper crossover point is appropriate in Illinois versus Virginia?

A. The decision on what the proper crossover point should be for the modeled network must be based on the planned capabilities of the actual network in order to be considered TELRIC compliant. I could not find any specific references to the planned capabilities of the actual Verizon Virginia network in the entire discussion of the fiber-copper crossover point in the Virginia Memorandum Opinion and Order.[21] As such, I cannot speak to any characteristics of the Verizon Virginia network that would lead to the conclusion that a 12kft crossover point was the most appropriate choice. I can affirmatively speak to the evidence presented here, however, which clearly shows that an 18kft copper-fiber crossover point is a more appropriate network design for SBCI.

Q. What is your opinion regarding Mr. Smallwood's assertion that the impact of changing the copper-fiber crossover point from 12kft to 18kft is small?

A. It was my direct testimony that the impact was much smaller than what I had expected it to be. Mr. Smallwood accurately indicates that the 12kft scenario produces a TELRIC cost that is only 1.14% higher than under the 18kft scenario.

[21] Id., ¶¶238-242

However, what Mr. Smallwood fails to recognize is that the impact is much more significant in Access Area B, where the increase in cost is $2.21 (13.53%) and in Access Area C, where the increase is $0.98 (5.03%). Although these costs may not appear significant to an employee of the largest ILEC in the state of Illinois, the competitors that pay these costs for access to SBCI's network might not be as convinced, nor should the ICC.

One of the reasons the cost impact is not as significant as I thought it would be is that the mix of copper gauging shifts automatically to higher cost cables as the crossover point is increased to 18kft. CLEC witnesses criticized the inclusion of higher cost copper gauging in direct testimony, arguing that the 900 ohm standard imposed by SBCI is inappropriate.[22] I have not adopted the Joint CLEC position regarding this issue, as I am not qualified to assess their position. However, it is instructive to note that the 1300 ohm standard proposed by the Joint CLECs would have the effect of not forcing as much higher gauged copper to be modeled under the 18kft design. Therefore, if the Commission accepts the position of the CLECs regarding ohm requirements, the impact of the switching to an 18kft crossover point would be an even larger cost reduction than I have calculated.

C. Allocation of Common RT Equipment Investment

[22] AT&T Exhibit 2.0P at 110-114.

Q. Please describe Mr. Smallwood's position regarding your proposal to remove a percentage of RT equipment investment from LoopCAT.

A. First, Mr. Smallwood argues that because the RT equipment is only configured for the provision of voice services in LoopCAT, it is appropriate to assign 100% of the investment to UNE loops.[23] Second, Mr. Smallwood argues that additional investment would be required to support data services, namely DSL services.[24] Finally, Mr. Smallwood argues that DSL functionality is incremental in nature.[25] Based on these arguments, he concludes that only the incremental investment to equip RTs to provide data services should be assigned to data services, and the remainder of costs should be assigned to voice services.

Q. What is your opinion regarding Mr. Smallwood's arguments and conclusion?

A. I do not dispute that the RTs in LoopCAT are not configured to provide data services such as DSL. I also do not dispute that additional incremental investment would be required to make RTs capable of providing data services. Further, I agree that all incremental costs of providing data services should be recovered through the rates for these services.

My concern is that SBCI is attributing investment common to both voice and data entirely to UNE loop costs. While it is impossible to declare any method of

[23] Id. at 83.
[24] Id. at 84.
[25] Id.

allocating costs as perfect, because the very act of allocation requires a certain amount of subjectivity, there are approaches that are logically more appropriate than others. Without some form of allocation of common investment to data services, regulated voice services are, in effect, subsidizing unregulated data services. Based on information I have received in ICC Docket 00-0393, it has been shown that the capacity allocated to data services in SBCI's RTs is 25%.[26] Therefore, I propose that a 25% reduction of RT investment is in order to properly reduce the burden on voice services. The reduction in common investment for RTs in LoopCAT is not lost by SBC, but the burden of its recovery is more appropriately shifted to data services.

[26] See Staff Exhibit 4.0 at 18; ICC Docket 00-0393, Ameritech Rehearing Exhibit 7.02P.

III. Imputation

Q. How has SBCI responded to the concerns you voiced in your direct testimony?

A. SBCI witness Eric Panfil addresses my imputation concerns in his rebuttal testimony.[27] In doing so, Mr. Panfil abandons the imputation tests provided by SBCI in its December, 2002 tariff filing, putting forth a "price squeeze test" as an alternative.[28] Chief amongst his criticisms is that my imputation test improperly defines the "service" that is subject to the test as including only network access lines.[29] Mr. Panfil additionally criticizes my exclusion of certain nonrecurring costs and revenues from my imputation tests.[30] Finally, Mr. Panfil takes exception to the inclusion of the UNE rate for the local switch port rather than its LRSIC in my tests.[31]

Q. Exactly how has Mr. Panfil changed his position regarding imputation?

A. Mr. Panfil had stated in direct testimony that it was not clear to him whether an imputation test should be applied solely to the business network access line.[32] In his rebuttal testimony, he makes it abundantly clear that he is certain that an imputation test should not be applied so narrowly. Although this may appear to be only a slight change in position, its ramifications are significant. When the

[27] SBCI Exhibit 1.1 at 8-25.
[28] Id. at 9; see also Schedule ELP-R1 (Confidential) to SBCI Exhibit 1.1.
[29] Id. at 10-21.
[30] Id. at 23.
[31] Id. at 23, 24.
[32] SBCI Exhibit 1.0 at 23, 24.

tariff filing that initiated this proceeding was made, SBCI included an imputation study that included 12 distinct tests that were based, similarly to those that I propose, on business network access lines. Although Mr. Panfil did not specifically endorse these tests in his direct testimony, he did not indicate that they were of an inappropriate form either. Upon rebuttal, Mr. Panfil's outright rejection of a test based solely on the network access line indicates that he does not believe that the cost support provided with SBCI's tariff filing was appropriate.

Another significant departure Mr. Panfil makes from his direct testimony is the way he characterizes Dr. Debra Aron's analysis of the proposed price increases for UNE loops. In his direct testimony, Mr. Panfil merely purports that Dr. Aron's analysis shows that CLECs can continue to compete successfully in SBCI's service territory.[33] In his rebuttal testimony, however, Mr. Panfil goes as far as indicating that Dr. Aron's analysis is, in fact, the proper form of the imputation test.[34]

Q. Does Dr. Aron actually propose an imputation test in her direct or rebuttal testimony?

A. No. Dr. Aron is careful not to indicate that she is proposing an imputation test in either her direct testimony or her rebuttal testimony. By using the "search" feature in Adobe Acrobat Reader, I have discovered that the word "imputation" does not occur once in Dr. Aron's direct testimony. In Dr. Aron's rebuttal

[33] Id. at 23.

testimony, the word "imputation" appears only once—at page 63, and it is not in reference to her own work. Rather, Dr. Aron is merely summarizing the position of an intervenor witness. What Dr. Aron does present is a price squeeze analysis, and not an imputation test. Without directly challenging the requirements of Section 13-505.1 of the PUA, Dr. Aron argues that her analysis is superior to the type of price squeeze analysis found in an imputation test.

Q. What can be concluded regarding the imputation proposals put forth by SBCI in light of Mr. Panfil's and Dr. Aron's direct and rebuttal testimonies?

A. It is still unclear as to the exact form of the imputation tests that SBCI is proposing in this proceeding. Mr. Panfil, as a witness for SBCI, does not endorse the form of the tests submitted by SBCI with its December 24, 2002, tariff filing that initiated this proceeding. Mr. Panfil alternatively prefers the analysis presented by Dr. Aron, who does not present her analysis as an alternative form of an imputation test for the purpose of satisfying Code Part 792 or Section 13-505.1 of the PUA. In short, it is somewhat difficult to divine SBCI's position from its testimony. As such, in the remainder of this rebuttal testimony, I address the proposals of Mr. Panfil, which may or may not be the opinion of the company.

Q. What is your opinion regarding Mr. Panfil's proposed imputation test?

A. I agree with Mr. Panfil that the Commission has some latitude in developing imputation tests and that the Public Utilities Act and Code Part 792 do not

[34] SBCI Exhibit 1.1 at 14.

specifically prohibit a more inclusive approach to imputation. However, I disagree with the assumptions made by Mr. Panfil that serve only to inflate the revenue side of the test. Mr. Panfil's generous assumptions conveniently support the proposed increases to UNE loop rates proposed by SBCI in this proceeding and do not reflect a reasoned approach to imputation.

Q. Is it your testimony that, by law, the imputation test must be of the form that you propose?

A. No. I am not a lawyer, and this question is ultimately one for the Administrative Law Judge and Commission. As a rates analyst, I am of the opinion that the imputation requirement embodied in Section 13-505.1, is intended to protect against certain carriers (those carriers that provide both competitive and noncompetitive services) exercising a price squeeze to protect the market for its competitive services. Section 13-505.1(a) and (b) allow only two exclusions to its requirements, and it is my understanding that business network access lines do not fall into any of these categories.[35] As I will show later in this rebuttal testimony, the imputation tests for business network access lines must be narrowly defined in order to protect SBCI's competitors from a price squeeze.

Q. Do you agree with Mr. Panfil that CLECs compete for a gamut of services and not just the access line?

[35] Section 13-505.1(a) specifically excludes residence untimed calls from the test; Section 13-505.1(b) excludes interexchange private lines from the test under certain circumstance.

A. Yes. It would be naïve to assume that CLECs compete solely for network access lines. This is especially true considering the fact that vertical services and usage are more profitable than the access line.

Q. Do you agree with Mr. Panfil's assertion that your analysis is neither useful nor realistic[36]?

A. No. I correctly decided not to include revenue for vertical services or usage in my imputation tests because, if such revenues were included, a price squeeze would result in the market for customers that do not purchase a significant amount of vertical services and usage. Such customers exist, very probably in large numbers. Further, the imputation tests that I perform show that SBCI's proposed rates fail imputation in almost all cases. In effect, the tests indicate that CLECs could not compete in at least a portion of the business access line market if SBCI's proposed UNE loop rates were accepted. Such a conclusion is indeed useful to the Commission as it considers the appropriateness of SBCI's tariff filing proposal.

The price squeeze analysis presented by Mr. Panfil, on the other hand, would only protect against price squeezes in the market for customers that subscribe to highly profitable extra features and customers that have high volumes of usage. His method, while inclusive of the various types of revenue that can potentially be derived from a network access line, is exclusive in that its results are only

[36] SBCI Exhibit 1.1 at 14, 15.

applicable to certain segments of the market. Therefore, Mr. Panfil's tests should be considered unrealistic and not useful, rather than my own.

Q. Do you have any other concerns about the form of Mr. Panfil's proposed imputation tests?

A. Yes. Mr. Panfil's proposal does not include tests for each type of business access line. Rather, his proposal only includes three tests, one for each access area.[37] Mr. Panfil does not indicate why he feels that it is proper to ignore the distinct rate and cost structure for the various types of access line affected by SBCI's proposed UNE loop rate increases. As my imputation analysis shows, the results of the imputation test vary depending on the type of service being subjected to the test. As such, Mr. Panfil does not provide evidence that any one particular type of access line satisfies imputation requirements, even with the generous inclusion of revenue for various types of services that he proposes.

Q. How would Mr. Panfil's imputation proposals impact the effectiveness of Section 13-505.1 and Code Part 792 in the future if the Commission were to accept them?

A. Schedule ELP-R1 to Mr. Panfil's rebuttal testimony shows a significant margin for business network access lines. If the Commission were to accept Mr. Panfil's tests, the imputation tests would no longer be useful to protect CLEC from price squeezes – in other words, the tests would no longer serve the purpose for which

[37] See Schedule ELP-R1 to SBCI Exhibit 1.1.

imputation was established. This is clearly illustrated in the table below, which lists the margin by which each access area passes Mr. Panfil's test and the corresponding retail rates for business network access lines.

	Access Area A	Access Area B	Access Area C
Mr. Panfil's Margin*	$ X.X	$ X.X	$ X.X
SBCI Bus. NAL Rates	$ 5.00	$ 8.21	$ 11.87

*Source: SBCI Exhibit 1.1, Schedule ELP-R1

Because the margin exceeds the access line rates in each access area, each of these access line rates could be reduced to zero and still pass Mr. Panfil's imputation test! Of course, such a result would never occur because the services must also be priced at or above their LRSIC. Nonetheless, Mr. Panfil's proposed imputation test would be of no use whatever in preventing a prize squeeze even under the most aggressive of price cuts for these business network access lines.

Q. How would Mr. Panfil's proposal effect the administration of imputation tests in the future?

A. Including all vertical services and usage into the business access line tests has the additional negative impact of forcing the company to perform a comprehensive imputation test (or tests) each time it files to increase the UNE for a network access line, files to reduce any type of retail vertical service, or files to reduce any usage rate for business customers. Although there is sufficient margin for the company to pass the test in most every conceivable instance,

nonetheless a test would be required. Such a requirement would be a burden on the company as well as Staff.

Q. Are you persuaded by Mr. Panfil's arguments concerning the inclusion of nonrecurring costs and revenues into the imputation test?

A. No. I stated several reasons why nonrecurring charges should not be a part of the imputation test in my direct testimony.[38] Chief amongst these reasons is that line connection charges are not a part of the provisioning of retail access lines or UNE loops. To counter that argument, Mr. Panfil simply states that nonrecurring charges are part of the total service package, and it would therefore be inappropriate to examine these charges separately from a ratemaking and economic perspective.[39] Mr. Panfil illustrates this purported interdependence by arguing that some carriers may choose not to recover nonrecurring costs in up front charges so as to attract a customer, and make up the difference in its recurring rates over the life of the service.[40] Although this statement might be true, such a scenario could only exist when recurring rates are sufficiently high to recover recurring costs, which is not the case under SBCI's UNE rate proposal. As such, I am not persuaded by Mr. Panfil's argument.

Q. Do you have any additional concerns regarding the inclusion of nonrecurring costs in the imputation test?

[38] Staff Exhibit 4.0 at 34, 35.
[39] SBCI Exhibit 1.1 at 23.
[40] Id.

A. Yes. Including nonrecurring costs in the imputation test would introduce a new layer of complexity and subjectivity to the test. It is not a simple matter of including an easily identifiable cost to one side of the test and a rate to the other side of the test. This is because nonrecurring costs for UNEs vary depending how the UNE is provisioned. If a CLEC has simply assumed the business of a pre-existing single line business customer with no vertical services, nonrecurring costs are relatively straightforward. However, if it is necessary to create a new UNE combination in order for a CLEC to provision service to a customer, additional charges apply. This problem is further compounded by the fact that additional nonrecurring charges occur each time a vertical service is activated. By adding such complexity into the test, any assumptions made regarding the appropriate nonrecurring cost(s) to be imputed could potentially skew the test.

Q. Are you persuaded by Mr. Panfil's arguments concerning the use of LRSIC rather than UNE rates for the local switching port in the imputation test?

A. No. Mr. Panfil indicates that the switching port element does not represent an exclusive, or near exclusive, option for the competing carrier, pointing to an SBCI analysis in another proceeding that shows that 25% of unbundled loops are provided on a stand-alone basis.[41] This argument is unconvincing for two simple reasons. First, the fact that SBCI is required to provide unbundled switch ports indicates that there is a need for the unbundling of these elements. It would be difficult for new entrants into a market to justify the purchase of switching

[41] Id. at 23, 24.

equipment without a sufficient customer base in which to recover its costs. Second, the study cited by SBCI indicates that 75% of unbundled loops are provisioned with the unbundled switching element. This indicates that CLEC using UNEs to provision service to customers depend on the UNE for the local switch port a substantial majority of the time. As such, I do not see how Mr. Panfil can conclude from this study that the local switch port UNE is not essential for a significant portion of SBCI's competitors.

Mr. Panfil also argues that the inclusion of the UNE switch port serves to highlight the narrow nature of my analysis because I fail to impute revenue for the services that such functionality provides, such as usage and vertical services.[42] I thoroughly discuss the reasons why such revenues should not be included in the imputation test in my rebuttal testimony. I fail to see how this fact supports Mr. Panfil's position that it is more appropriate to include the LRSIC for the switch port rather than the UNE rate in the imputation test, though.

Q. Please explain the changes to the imputation test you are proposing.

A. I am not proposing any changes to the form of the imputation test that I presented in my direct testimony. I am merely updating the imputation schedules presented in my direct testimony to reflect changes to UNE loop rates proposed by Staff and SBCI. The updated tests for SBCI's proposed UNE loop rates are in Schedule 24.01 and show that SBCI's business network access lines would fail

[42] Id.

imputation for ten of the twelve instances applicable to this proceeding. The imputation tests for Staff's proposed UNE loop rates are in Schedule 24.02, and show that all of SBCI's business access lines would pass imputation if Staff's rate proposals were adopted in their entirety.

Q. Have you recalculated the impact on retail business access line revenue as a result of revising your imputation tests?

A. Yes. Schedule 24.03 is essentially an update of Schedule 4.04 of my direct testimony, which calculates the amount by which SBCI would have to increase its retail network access line rates in order to bring the company into compliance with our imputation requirements if its UNE rate proposals were accepted. Schedule 24.03 shows that the impact would be a substantial windfall for the company, totaling $105,889,462 in increased retail revenue annually.

IV. Miscellaneous Cost Development Issues

Q. Have you made any changes to annual charge factors ("ACFs") as a result of SBCI's filing of revised cost models in this proceeding?

A. Yes. In addition to the changes that SBCI has made to LoopCAT in its rebuttal filing, the company has also made minor changes to its support asset factor ("SAF") spreadsheet and its ACF spreadsheet in its rebuttal filing. As a result, I have had to recalculate ACFs to be used in LoopCAT and the Shared and Common Cost model. Schedule 24.04 shows my new proposed ACFs, and compares them to the revised ACFs submitted by SBCI in its rebuttal filing. This schedule is an update to Schedule 4.01 to my Direct Testimony.

Q. Do your revised ACFs reflect changes to Staff proposed inputs?

A. Yes, but only in one minor respect. In my direct testimony, I indicated that Staff Witness Peter Lazare was proposing that the sales tax rate for SBCI be changed from 8.5% to 7.14%. With its rebuttal filing, SBCI revised the sales tax rate that it is proposing to 6.75%. As a result, Staff witness Lazare no longer takes issue with SBCI's proposed rate. Therefore, the ACF calculations in Schedule 24.04 represent a departure from Staff's previously proposed sales tax rate and accept SBCI's newly proposed rate. Staff does not recommend any modification to the

proposed input changes put forth in direct testimony that effect ACF development.[43]

Q. Do the changes to the ACF and SAF spreadsheets affect other Staff witnesses?

A. Yes. Although the changes are relatively minor, it was necessary to provide the updated ACF information to Staff witness Dr. Genio Staranczak for the development of TELRIC costs. In addition, I had to provide updated capital cost factors and SAF spreadsheet figures to Staff witness Karen Chang for the development of shared and common cost factors.

Q. Did you provide any additional information to other Staff witnesses?

A. Yes. Due to the re-assignment of duties for Staff witnesses, I have taken on the added responsibility in this proceeding of providing Staff witness Karen Chang with updated information from LoopCAT that is needed for use in her shared and common cost factor determination.

[43] Those changes include a cost of capital and average service life, as indicated in page 25 of my direct testimony.

V. Conclusion

Q. Please summarize your findings in this proceeding.

A. I am not persuaded by the criticisms to my direct testimony elicited by SBCI witnesses in their rebuttal filings. As such, my findings regarding cost issues remain largely unchanged from my direct testimony. The only change of any significance is that I now request that SBCI run sensitivity analysis on LoopCAT to determine the most appropriate mix of the various RT sizes available from SBCI's vendor. The reason why I am now requesting this information is because my previous understanding regarding the ability of LoopCAT to incorporate the necessary modifications to do so has been changed.

I indicated in my Rebuttal Testimony to Intervenors that I may make modifications to my recommendations based on their proposals after a review of SBCI's response to these proposals. At this time, I do not make any such modifications. I must note, however, that this does not constitute a rejection of the intervener's positions, but rather that I am not in a position to adopt their proposals at this time.

Although I disagree with the arguments put forth by SBCI witness Eric Panfil, it was still necessary to update the imputation tests that I perform in Schedules 24.01 (SBCI proposed rates) and 24.02 (Staff proposed rates). The results of the analysis do not change significantly, however. SBCI's rate proposal fails in all

but two instances out of twelve, and Staff's proposal passes for all rates. Because of modifications that SBCI has made to its ACF spreadsheet and its SAF spreadsheet, I have found it necessary to recalculate Staff's proposed ACFs. Those changes are presented in Staff Schedule 24.04.

Q. Does this conclude your Rebuttal Testimony to SBCI?

A. Yes.